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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/067,208	04/28/1998	WILLIAM G. HOWARD	P-7860	9814
27581	7590	01/26/2004	EXAMINER	
MEDTRONIC, INC. 710 MEDTRONIC PARKWAY NE MS-LC340 MINNEAPOLIS, MN 55432-5604			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 01/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/067,208

Applicant(s)

HOWARD, WILLIAM G.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10,12-17,95,96,102 and 103 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,12-17,95,96,102 and 103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 24, 2003 has been entered. Claims 1, 3-8, 10, 12-17, 95, 96, 102, and 103 are pending herein. Although they have been amended, claims 1, 3-8, 10, 12-17, 95, and 96 remain rejected for substantially the reasons of record. Claims 102 and 103 are newly rejected under 35 USC §101 as claiming the same invention as that claimed in the Howard '760 patent.

Claim Objections

2. Claims 1 and 102 are objected to because of the following informalities: in claim 1, part (a)(1), line 8, --is-- should be inserted after "collector"; in claim 102, line 11, the word "anode" is recited twice, which appears to be a typographical error. One of these recitations should be changed to "cathode assembly." Appropriate correction is required.

Double Patenting

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same

invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 102 and 103 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3 of prior U.S. Patent No. 5,439,760. This is a double patenting rejection.

Claim 1 of the patent and claim 1 of the instant application are directed to the same invention because, although the patent does not use the term "dielectric," a battery separator by definition is a dielectric material. Further, the patent claim does not use the language "at least a single layer" in reference to the separator, but the claim is open-ended and covers embodiments containing one or more separator layers. Accordingly, as there is not believed to be an embodiment of the invention that reads on one claim but not the other, a statutory double patenting rejection is proper. See MPEP §804(II)(A).

5. Claims 102 and 103 are directed to the same invention as that of claims 1-3 of commonly assigned U.S. Patent No. 5,439,760. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject

matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

Terminal Disclaimer

6. It is noted that the Terminal Disclaimer filed on July 2, 2002 has been entered into the file and is sufficient to obviate any non-statutory obviousness-type double patenting rejections that were made or would be made in the present application. Therefore, the intent of the "draft" terminal disclaimer filed on November 24, 2003 is not clear. Applicant is reminded that a terminal disclaimer is not sufficient to obviate the statutory double patenting rejection set forth in this Office action.

Claim Rejections - 35 USC § 103

7. Claims 1, 3-8, 10, 12-17, 95, and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al (U.S. Pat. 5,549,717) in view of Howard et al (U.S. Patent 5,439,760).

Regarding claims 1 and 10, in Figure 4 and in column 3, line 36-column 4, line 55, Takeuchi et al. teach an electrode assembly having two substantially straight sides and

comprising spirally-wound anode and cathode assemblies. Regarding claims 1, 3, 10, and 12, the anode assembly comprises a nickel current collector (68) and lithium strips (64, 66). Regarding claims 1 and 10, a tab (72) extends from the edge of current collector 68. Current collector 68 has a smaller length and width than the length and width of lithium strip 66 (see col. 4, line 39). Regarding claims 1, 4, 6, 10, 13, and 15, the cathode assembly comprises silver vanadium oxide active material (47) which is embedded into a titanium current collector (54). Regarding claims 1 and 10, the current collector 54 comprises tabs (48, 50) extending from the edges. Regarding claims 5-8 and 14-17, Takeuchi et al. incorporate by reference the disclosure of Keister et al (U.S. Pat. 4,830,940), which discloses that the cathode can comprise a mixture of silver vanadium oxide, PTFE binder, and graphite powder conductivity enhancer (col. 8, lines 37-42 of Keister et al). Regarding claims 1 and 10, in column 4, line 26, Takeuchi et al. disclose that the separator surrounding the cathode assembly is sealed on all three open sides so that only the tabs project. In column 5, line 25, Takeuchi et al. disclose that alternatively, a separator may be folded around the anode assembly in a manner similar to the cathode assembly. Regarding claims 1, 10, and 97, in Figures 7, 8, and 10 and in column 5, line 63 et seq., the reference discloses that the portion of the anode (80) around the periphery of the electrode assembly (i.e., the "end segment") requires only one lithium strip.

Takeuchi et al. do not expressly teach that the anode current collector forms the outermost layer of the electrode assembly (claim 10), or that the cathode current collector is shorter than the lithium strip by an amount that enables the end segment of the anode assembly to be wound into the outermost layer (claim 10). Takeuchi et al. also do not expressly teach that the separators cover both the cathode and anode assemblies simultaneously or that the alkali

metal strips are "mechanically bonded" to the anode current collector, as recited in claims 1 and 10.

Howard et al. teach pocket-type separators covering spirally wound anode and cathode assemblies in column 3, lines 37-46. Additionally, Howard et al. teach in Figure 10 and in column 6, lines 53-65 that the length of the alkali metal strip (15) is longer than the length of the cathode current collector by an amount that enables the end segment of the anode assembly to be wound into the outermost layer. In claim 3 and in column 4, line 65, Howard et al. teach that the alkali metal strips are "bonded" (i.e., pressed) to the anode current collector.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the patent of Howard et al. to use separators simultaneously on the anode and cathode assemblies of Takeuchi et al. Although Takeuchi et al. in effect disclose that a separator is placed on either the anode *or* the cathode assembly, the artisan would understand that covering both electrode assemblies (as shown by Howard et al.) would be an advantageous modification of the battery of Takeuchi et al. because dendrite protection would be increased and delamination of both active material layers would be decreased. As stated in Howard et al. at column 3, line 40, "[t]he separator pouch then prevents the transport of stray material in the cell which could cause a short circuit and the double thickness of the separator between anode and cathode elements better resists damage during the winding process." The separators of Howard et al. are made by a folding and sealing method (col. 5, lines 33-68 of Howard et al.), as recited in claims 95 and 96.

Furthermore, the artisan would be motivated to mechanically bond (i.e., press) the alkali strips of Takeuchi into the current collector thereof. As noted above, Howard et al. teach this

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configuration in column 4, line 65. Such configuration would be advantageous in the battery of Takeuchi because intimate contact of active material and its current collector is beneficial to battery performance. Accordingly, the artisan would be motivated to press the alkali strips of Takeuchi into the current collector thereof.

Furthermore, the disclosure of Takeuchi et al. provides sufficient guidance for the artisan to ascertain that the anode current collector forms the outer layer (winding) of the electrode assembly. As stated above, the reference discloses that the portion of the anode around the periphery of the electrode assembly requires only one lithium strip. From this disclosure, the artisan would be able to ascertain that the one lithium strip would be present on the inside portion of the anode current collector, in order to make contact with a corresponding cathode active material layer. Accordingly, it would be well within the skill of the art to ascertain that the anode current collector would form the outer layer of the electrode assembly. Additionally, it is noted that the Howard et al. reference is also concerned with the having the anode current collector in the outermost layer of the cell. Therefore, the way that Howard et al. achieve this configuration (by making the cathode current collector shorter than the lithium strip, as recited in claim 10) is deemed to be an obvious way of achieving this same configuration in the battery of Takeuchi et al.

Response to Arguments

8. Applicant's arguments filed November 24, 2003 have been fully considered but they are not persuasive. Applicant maintains the position that the '760 patent (Howard et al.) supports the claimed limitation that the anode current collector is shorter in length than the alkali metal strip. However, Applicant's assertion that column 6, lines 46-65 of Howard supports this limitation is still not persuasive. As stated in Advisory Action of October 10, 2003, this disclosure is only concerned with one end (the outer end) of the anode assembly. There is no disclosure regarding the other (inner) end of the anode assembly, i.e., the one wound on the mandrel. Thus, it still cannot be concluded that the total length of the current collector 5 must necessarily be less than the total length of the strip 15. The coverage of alkali metal in the inner part of the battery is unrelated to the coverage of alkali metal in the outer part. The latter is identified by the reference as being critical, but no mention is made of the former.

Applicant further asserts that "Howard expressly supports the notion of a relatively shorter anode current collector by simply application of principles of claim interpretation," and cites claim 3 of Howard. However, the assertion that a claim interpretation is supported wherein the current collector is "wholly surrounded by 'a length' and 'a second, shorter length of reactive anode material'" is not persuasive because the language of the Howard '760 claims still does not compel such a conclusion. The mere selection of one of several possibilities or outcomes is insufficient to establish possession of an invention under 35 USC §112, first paragraph. When an explicit limitation in an application claim "is not present in the written description whose benefit is sought it must be shown that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation." *Hyatt v.*

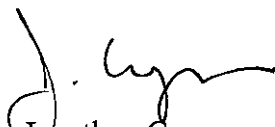
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Boone, 146 F.3d 1348, 1353, 47 USPQ2d 1128, 1131 (Fed. Cir. 1998). As it is believed that the description of Howard does not require the limitation that the anode current collector be shorter in length than the alkali metal strip, instant claims 1, 3-8, 10, 12-17, 95, and 96 are still not believed to be entitled to the filing date of the Howard '760 patent. See also MPEP §2163(II)(2)(b).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (571) 272-1302. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.


Jonathan Crepeau
Patent Examiner
Art Unit 1746
January 19, 2004